

the hilt recesses are substantially unobstructed, said retention structure biased to said rest position.

15. The shield of claim **14**, wherein the resiliently deformable retention structure comprises a ridge projecting inwardly from a respective flexible outer wall of each of the first and second hilt recesses.

16. The shield of claim **15**, wherein each flexible outer wall is operable to move against the biasing between said rest position and said release position in response to application of a threshold level of force against the respective ridge by a respective portion of the syringe hilt, wherein:

application of at least the threshold level of force by the syringe hilt against the respective ridge from the direction of the inner face of the locking ring causes the syringe hilt to be retained by the retention structure; and

application of at least the threshold level of force by the syringe hilt against the respective ridge from the direction of the outer face of the locking ring causes the syringe hilt to be released by the retention structure.

17. The shield of claim **1**, further comprising a syringe adapter having:

a barrel adapter portion dimensioned to receive the syringe barrel and to, in turn, be received at least partly within the compartment of the elongate body; and

a hilt adapter portion extending from the barrel adapter portion and dimensioned to receive the syringe hilt.

18. A locking ring for a syringe shield, the syringe shield having:

an elongate body comprising a compartment extending longitudinally therethrough from a body cold end to a body hot end, the compartment dimensioned to receive a syringe barrel of a syringe;

a cold end cover dimensioned to at least enclose the compartment and the syringe at the body cold end; and

a hot end cover dimensioned to at least enclose the compartment and the syringe at the body hot end,

the locking ring dimensioned to be associated with the body cold end and to receive and engage a syringe hilt of the syringe to enable selective inhibition of one or both of: longitudinal and rotational movement of the syringe with respect to the body.

19. The locking ring of claim **18**, comprising:

a ring body having an outer face and an inner face, wherein the inner face faces the body cold end of the elongate body;

a channel having first and second hilt portions flanking a barrel portion, the channel extending entirely through the ring body from the outer face to the inner face, the hilt portions and the barrel portion dimensioned to permit the syringe hilt and the syringe barrel to pass respectively therethrough only while the syringe is in a first rotational orientation with respect to the ring body;

first and second hilt recesses in the ring body flanking the barrel portion of the channel, the hilt recesses extending only partway through the ring body from the inner face towards the outer face and dimensioned to receive respective portions of the syringe hilt from the direction of the inner face of the ring body only while the syringe is in a second rotational orientation with respect to the ring body, the second rotational orientation being different than the first rotational orientation, wherein rotational movement of the syringe with respect to the locking ring is inhibited while the syringe hilt is received within the first and second hilt recesses;

shelf structure associated with the hilt recesses for permitting rotation of the syringe between the first and second rotational orientations only while the syringe hilt received within the channel is longitudinally level with the inner face of the ring body; and

resiliently deformable retention structure associated with the hilt recesses for selectively retaining the syringe hilt within the hilt recesses, the retention structure moveable between a rest position in which the hilt recesses are partially obstructed and a release position in which the hilt recesses are substantially unobstructed, said retention structure biased to said rest position.

20. The locking ring of claim **19**, wherein the resiliently deformable retention structure comprises a ridge projecting inwardly from a respective flexible outer wall of each of the first and second hilt recesses.

21. The locking ring of claim **20**, wherein each flexible outer wall is operable to move against the biasing between said rest position and said release position in response to application of a threshold level of force against the respective ridge by a respective portion of the syringe hilt, wherein:

application of at least the threshold level of force by the syringe hilt against the respective ridge from the direction of the inner face of the locking ring causes the syringe hilt to be retained by the retention structure; and

application of at least the threshold level of force by the syringe hilt against the respective ridge from the direction of the outer face of the locking ring causes the syringe hilt to be released by the retention structure.

22. A unit dose shipment shield for containing a syringe comprising the locking ring of one of claims **18** to **21**.

23. A system for shipping radiopharmaceutical material comprising:

the shield of one of claims **1** to **17**; and

a container in which the shield can be contained and that an operator can carry.

24. The system of claim **23**, wherein the container is a shipping bag.

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